

water), a syringe-ful once daily or every other day; *b*, local massage, for 15 minutes, once daily, and, *c*, the internal administration of iodide of potassium. By the end of three weeks all subjective symptoms disappeared, while the tumor was found to have greatly decreased in bulk (was half the size compared with the period before the treatment). Unfortunately, the woman was subsequently lost from sight. —*Ietopis Khirurgicheskago Obshtchestva v' Moskve*, No. 6, 1890, p. 505.

VALERIUS IDELSON (Berne).

CHEST AND ABDOMEN.

I. A Method of Removing an Acute Pneumothorax, Resulting from Penetrating Wounds of the Thorax. By Dr. WITZEL. The pneumothorax is a dangerous complication of penetrating wounds of the chest, partly interfering with respiration, partly with the circulation by pressure on the heart and large vessels. The author recommends his method, which was tried in a case in Trendelenburg's clinic. His idea is to change the pneumothorax into an artificial hydrothorax and then to empty this by aspiration.

The bleeding having been arrested, a male catheter of metal is introduced into the pleural cavity through the highest points of the wound, its beak being parallel with the chest wall. The wound is thereafter closed by sutures, both air- and water-tight, with the exception of a little opening at the highest point. The pleural cavity is now generally filled with a solution of boracic acid, of the temperature of the blood, till all the air is expelled through the catheter, and all the fluid is then removed by depressing the irrigator, which then acts as a syphon. The case treated in this way progressed very favorably. The respiration was quiet and regular after the operation, the percussion and auscultation normal. —*Centralb. f. Chirurgie*, No. 28.

HERMAN MYNTER (Buffalo).

II. A Case of Large Pulmonary Abscess Surgically Treated. By FRANCIS W. GREENE, M.B. (Mallow, Ireland.) A boy, æt. 6, with a history of pneumonia with hepatization of the left

lung, the anterior portion of which failed to clear up, presented hectic in the fourth week with purulent expectoration. In the fifth week, about half a pint of pus was suddenly expectorated. The patient had complained of pain at a point in the anterior axillary line between the fifth and sixth ribs, where tenderness was found on pressure, and apparently bulging, without reddening of the skin, and with gurgling rales after the expectoration. Two days later, the physical signs having indicated that the abscess had filled again, under chloroform and with antiseptics, a fine trocar and canula was pushed slowly between the ribs, the trocar being withdrawn twice to see if pus exuded; the abscess was reached at the depth of a little over an inch. The pleural surfaces being adherent, with the canula as a guide, an incision was made parallel to the ribs about an inch and a half long; a trachea dilator forceps pushed through the wound and opened; when there escaped about a half a pint of pus. When the abscess was empty, air escaped with each expiration. The wound was drained and dressed. The hectic cough and expectoration disappeared at once, the character of the discharge rapidly improved and disappeared, so that the incision was closed on the twelfth day, and entire recovery soon followed.—*London Lancet*, Jan. 24, 1891.

JAMES E. PILCHER (U. S. Army).

III. **Aseptic Laparotomy.** By DR. H. FRITSCH. The author, taking advantage of the fact that all known antiseptic substances disturb to a greater or less extent the function of the cells, renounces these entirely, using only the normal salt solution, and sterilized water, in laparotomy cases. The results of 52 abdominal sections, performed between February and July of last year, seem to bear out the truth of his assumption, that strict asepsis should take precedence over antiseptics. The method consists in thorough cleansing of the operation field, the hands of the operator and assistants, and, in fact, everything coming in contact with the wound. From the moment of making the incision until the final closure of the wound, no chemical disinfectant is allowed to come in contact with the parts involved in the operation. Sponges, compresses and instruments are steam sterilized;

during the operation the sponges and the hands of the operator are cleansed with sterilized salt solution.—*Centrbl. f. Gyn.*, 1890, No. 29.

GEO. R. FOWLER (Brooklyn).

IV. Permanent Drainage of the Peritoneal Cavity in Chronic Idiopathic Peritonitis. By Dr. LUIGI CARVI (Rome). The writer employs permanent drainage in cases of chronic idiopathic peritonitis where the disease defies all methods of treatment, and the ascites reappears in spite of repeated paracentesis. A long curved trocar is introduced through the abdominal walls into the peritoneal cavity on one side and thrust through and out on the other. A drainage tube is then inserted, the openings closed with glass stoppers and the strictest antisepsis observed. During the first few weeks the fluid is drawn off once in twenty four hours, and in a case of the author it varied in amount from 500 to 1,000 grammes; then every two, every three days, and, finally, once a week. Gradual improvement usually takes place under this treatment. The writer cites a case in which treatment began in May, 1888, to end with recovery in March, 1889. —*Riforma Medica*, No. 1526, p. 838.

A. PICK (Boston).

V. Cholecystotomy for Gall-Stones, Performed on the Strength of Symptoms without Physical Signs. By A. W. M. ROBSON, F.R.C.S. (Leeds). The author has performed cholecystotomy twenty-three times without a death. He has heretofore reported five cases in which he operated on the strength of the symptoms alone and he now adds two more, as follows: (1) A man, æt. 29, had been well up to a year previously when he was seized while at work with a sudden attack of pain on the right side of the abdomen just below the ribs. Since that time these attacks had recurred at irregular intervals, but at no time had he been jaundiced nor had any swelling in the hepatic region; his stools had never been clay colored nor had his urine been specially dark. His last attack persisted six hours. The gall-bladder, rather small, was exposed lying well under cover of the liver. It contained one gall-stone lying loose while five others were crowded into the cystic duct from which they were removed by means of forceps

within aided by fingers without. The gall bladder was so far from the surface that the lower edge of the incision could not be brought to the parietal peritoneum, and the omentum was utilized to shut out the general peritoneal cavity by bringing up its right border, stitching it to the incision in the gall-bladder and then to the parietal peritoneum. A drainage tube was inserted into the gall-bladder and bile began to flow immediately after the completion of the operation. The drainage tube and sutures were removed in a week and the wound was completely healed a month later. (2) A man, æt. 50, presented a history of repeated accessions of pain in the liver at irregular intervals during the preceding year; he had been jaundiced but once, the color in the eyes then only lasting three days. Careful examination of the motions discovered no gall-stones and while it was thought that there was a slight swelling on the right side of the abdomen, it was not positive. Cholecystotomy discovered one gall-stone about the size of a cherry and without any facets. Bile flowed at once, the drain was removed on the third day and the stitches on the eighth, while the patient was cured in three weeks.

The author believes that unless gall-stones are small and can be passed, they tend to increase in number and may ultimately lead to most serious complications, such as exhaustion from repeated attacks of pain, fatal collapse from acute agory, fatal jaundice, dropsy and empyema of the gall-bladder, abscess of the liver, local peritonitis and perforation with all its sequelæ. Believing also that by far the greater number of patients who are suffering from repeated attacks of so-called spasms are in reality suffering from gall-stones, and that the operation for their removal offers but little danger, he recommends operation in all such cases which do not yield to a definite course, not necessarily very prolonged, of medical treatment.—*London Lancet*, Jan. 10, 1891.

VI. Gastrotomy for Ingested Foreign Body. By D. Lowson, M.D.(Hull). An insane man æt. 37 complained of pain in the left side where four days after admission to hospital a small nodular prominence appeared under the seventh costal cartilage; it was painful to the touch and disappeared with a jerk on slight pressure; there was

neither redness nor discoloration at this time, but later it became gradually more prominent and diffuse, redness appeared about it and an abscess seemed to be forming. There was neither sickness, vomiting nor any other symptom specially pointing to the stomach except perhaps an aversion to food. Poultices were applied and a week later a small opening appeared in the center with apparently gangrenous underlying tissue; and the next morning, projecting from this opening, was found an iron wire resembling a knitting needle about six inches long, which could be pulled out to a certain point but no further. The absence of pleurisy and peritonitis showed that, whatever the body was, sufficient adhesive inflammation had been set up by its passage through the wall of the stomach and other structures to prevent the escape of the contents of the stomach into the abdominal or thoracic cavities. Having decided not to remove the body by enlarging the existing opening, the stomach was reached through an incision parallel to the left margin of the substernal triangle, it was opened by a cut an inch long. The finger, introduced here; felt the rod and attached to it something like a handle; when removed, the body was found to be a skewer $7\frac{1}{2}$ inches long with an oval eye through which passed a fragment of a clay pipe $2\frac{1}{2}$ inches in length; one end of the pipe had been broken off close to the bowl and was thus a little larger than the rest of the stem, which prevented its slipping through the eye of the skewer. The stomach wound was stitched with Lembert's suture and the abdominal wound closed in the usual way. The patient made an excellent recovery, being fed entirely by the rectum for nine days, and after the eleventh day with liquid food by the mouth, solid food being permitted on the twentieth. The mental condition of the patient has rendered it impossible to discover when the bodies were swallowed or how he got them down.—*London Lancet*, Jan. 31, 1891.

JAMES E. PILCHER (U. S. Army).

VII. Case of Cancer of the Stomach in a Youthful Individual. By DR. H. KOSTER, (Upsala, Sweden). The writer describes the following case: A young servant girl æt. 23, without any hereditary predisposition to cancer, began a year before to suffer from diges-

tive disturbances, headache and pain in the præcardiac region. Her menses became frequent, profuse and irregular and she presented a general anæmic appearance. As the disease progressed vomiting of more or less undigested remains of food mixed with a black, acid fluid set in. At her entrance into the hospital her skin and mucous membranes were pallid; hands and feet cold; pulse small and weak. Appetite bad and the patient complained of a continuous boring pain in the epigastrium, not worse after meals but especially worse at night. Abdomen was not distended, but tympanitic on percussion; no resistance anywhere palpable, but the epigastrium in general was sensitive to pressure. The vomiting became worse; a small and circumscribed spot four centimetres above and one centimetre to the left of the median line finally could be outlined as the point of greatest sensitivity. This spot developed into a round resistant point of about the size of a fifty cent piece. It pulsated quite strongly under the finger and synchronously with the radial pulse. On percussion it gave forth a somewhat dull sound which could not be clearly marked out from its surroundings. A trial incision was made, and, as an inoperable tumor was discovered, the wound was closed. The patient died the following day.

The necropsy revealed a cancerous infiltration of the pyloric end of the stomach; anteriorly an aperture of about four centimetres diameter led partly into the stomach and partly into a hole filled with gangrenous and putrid masses. The mucous membrane of that portion of the stomach was thickened and gangrenous. Portions of the posterior pyloric wall were also destroyed. The author has already reported a similar case. (*Upsala. Lakarforen. Forh.* Bd. XXIII, H. 4 and 5).—*Upsala Lakareforen. Forh.*, Bd. XXV, H. 9.

VIII. Mikulicz' Operation in Cicatricial Stenosis of the Pylorus. By DR. POSTEMPSKI (Rome). At the session of January 25, 1891, Dr. Postempski presented to the Royal Medical Academy, of Rome, the stomach of an individual upon whom Mikulicz' operation for cicatricial stenosis of the pylorus had been performed. The stenosis had been the result of cicatricial contraction from ulcer.

ous pyloritis following the ingestion of nitric acid. The operation was done, the patient recovered, but contracted pulmonary tuberculosis and died. In the specimen the pylorus was dilated and permitted the passage of two fingers. Besides the pyloric there was also an œsophageal stenosis just above the cardiac end of the stomach. This latter was treated by means of olive-tipped bougies, yet, during the last months of life it reproduced itself, and although nothing but liquids were swallowed and digested the pylorus remained pervious. Therefore, the speaker would regard this anatomical specimen as a proof of the two means of dilatation in cicatricial stenosis of the pylorus of the same origin.—*Gazzetta degli Ospitali*, No. 10, p. 78, 1891.

IV. Plastic Surgery of the Stomach. An Experimental Study. By PROFESSOR GIOVSEPPI BONANNA (Surgical Institute at Rome). The many surgical operations which have been performed on the stomach with excellent results, the exact knowledge of its physiological functions which we possess to day, and the possibility and necessity which may, in extensive destruction of the walls of the stomach, arise to lead one to perform a plastic operation on this organ have induced the author to carry out his experiment. Among the cases where resection with subsequent plastic repair might be required he does not include diffuse cancer of the stomach, but mentions sarcoma, which is often circumscribed and solitary, and many other processes. He considers, at length, the physiology of the stomach and states that one must not be afraid that in resecting large portions of the walls of the stomach and replacing them by plastic surgery, too many of the peptic glands are removed so as to interfere seriously with digestion. The action of the pepsine is not, as the experiments of Wurtz and Hoppe Seyler have shown, the most important factor in the process of digestion, but that of the hydrochloric acid. Moreover, there is in regard to the action of pepsine a complementary action of pancreas; as concerns the hydrochloric acid, this is supplied in other ways.

These physiological facts have led the author to think that in extensive destruction of the walls of the stomach the loss of substance

may successfully be replaced by plastic repair. This would, however, not give to the stomach its primary capacity, but the results would be far superior to those if the two edges of the injured stomach would only be united by means of a single suture. It was necessary to find a tissue, which would respond to the following essential requirements:

1. That the graft to be used should not by its anatomical properties present any difficulties, in the applications of sutures between the walls and that of the stomach.

2. It should supply sufficient surface to give the largest possible amplitude to the stomach.

3. It should possess a superficial epithelium, so as not to be attacked by the gastric juices.

4. It should afford a broad pedicle to furnish the necessary blood supply to warrant the vitality of the transplanted section.

The transverse colon seemed to answer all these purposes. The experiment was performed on a dog.

Experiment.—On Feb. 15, 1890, after the animal had been prepared properly for a gastrotomy, all antiseptic precautions having been taken, the author made an oblique incision on the left side through the abdominal wall, running parallel for a few centimetres with the edges of the ribs and externally to the ensiform process of the sternum. The peritoneum was cut through, the stomach searched for and lifted out of the abdominal cavity. The entire anterior wall, including the greater curvature, was then removed by means of the scissors. After the hæmorrhage had been partly controlled by ligatures, the remaining mucous surface was disinfected by a tepid solution of boric acid and the remainder of the cavity filled out with antiseptic gauze, this forming the first part of the operation. The stomach being covered with a piece of warm cloth, one proceeded to the second step of the operation.

The transverse colon was now searched for and easily found. It was lifted up into the abdominal wound and, to prevent the escape of faecal matter on being incised, a section of it was ligated off by two elastic tubes and the part of intestine between the ligatures resected. The necessary portion of the mesentery was also dissected out, care

being taken to avoid the cutting of the vessels. Those of the latter which had to be cut were compressed by two ligatures immediately after having been severed. The whole resected tissue had now the shape of a triangle. The piece of resected intestine was divided longitudinally and its inner surface disinfected with a 3% boric acid solution. Meanwhile the opened intestine had somewhat shrunk in length and breadth, which circumstance is to be taken into consideration, although the secondary contraction was inconsiderable in this case.

The third step of the operation comprised the following: Uniting the resected portion of intestine to the edges of the posterior walls of the stomach by means of sutures, and joining of the ascending colon to the descending, thus re-establishing the continuity of the large intestines. The portion of mesentery which was intended to furnish nutrition for the resected piece of intestine remained isolated, except at the common point of attachment. The suture used in this operation was that adopted some time ago by Prof. Durante (Naples), consisting in three layers of sutures, of which two are continuous, joining the muscular coat to the muscular, the muscular and serous to the muscular and serous, and, finally, a separate catgut suture applied to the serous coat for the sake of security. To have the mucous layer not included in the suture is of utmost importance, as by its tendency to protrude it joins the mucous membrane of the other side at the line of the incision, thus forming an elevation preventing, immediately after the operation, the passing through of septic material.

The author operated, a few days after, upon another dog, which, however, died on the third day after the operation. At the necropsy it was found that a part of the suture of the colon had given way, on account of the rapid absorption of the catgut (No. 1). The sutures of the stomach were perfectly intact. The piece of intestine which was used in the plastic repair of the stomach showed no signs of softening and its mucous layer was perfectly healthy.

The first dog bore the operation well. He received twelve hours after the operation milk, and on the fifteenth day he could already digest bones without difficulty. He never vomited the ingested sub-

stances. He was killed at the end of March. To determine the digestive power of the stomach the dog was fed half an hour before death with bones. The contents of the stomach were given to Prof. Maggini for examination. His conclusions, after a very careful examination, the details of which are given in the original, were as follows: "The liquid contained a nearly normal amount of gastric juice, and I dare say that the precipitate of pepsine which was attained by treating it with bichloride of mercury, acetate of lead and alcohol corresponds nearly to the normal. There was no precipitate on boiling, treating with ferro-cyanide of potassium, perchlor of iron, etc." Examination of the abdominal cavity and viscera revealed vast adhesions of the great omentum to the anterior surface of the stomach, and of the line of suture of the stomach to the small intestine. The pancreas was enlarged. Otherwise the structures were not found to have undergone any histological change. After this excellent surgical and physiological success, the digestion and assimilation being hardly disturbed, the author does not hesitate to recommend this plastic operation in great loss of substance of the stomach. (*Gazzetta Medica de Roma*, XVI, fasc. 16, p. 377, 1890).

F. H. FRITCHARD (Boston).